

REMARKS

Claims 1-29 remain in the application and have been amended hereby.

As will be noted from the Declaration, Applicants are citizens and residents of Japan and this application originated there.

Accordingly, the amendments made to the specification are provided to place the application in idiomatic English, and the claims are amended to place them in better condition for examination.

Attached hereto is a version with markings to show changes made to the abstract and claims by the current amendment.

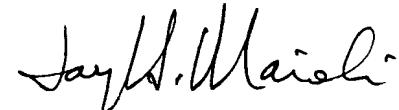
The Office is hereby authorized to charge any additional fees which may be required in connection with this Preliminary Amendment and to credit any overpayment to our Deposit Account No. 03-3125.

If a telephone interview could advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney.

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An early and favorable examination on the merits is earnestly solicited.

Respectfully submitted,
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE ABSTRACT OF THE DISCLOSURE

The Abstract has been amended as follows:

[The] A method and apparatus for recording data wherein the amount of light reflected from a disk is detected, and it is determined according to the amount of reflected light whether the disk is a recordable disk or a rewritable disk. The disk is controlled according to the result of determination such that it is rotated at a constant angular velocity (CAV) or at a constant linear velocity (CLV) and recording is executed. Further, rotation driving control of the disk is selected according to factors other than the type of the disk, such as according to whether random recording is allowed or not, according to a recording state in the disk, according to whether an alternative area is provided or not, according to a recording start position, or according to whether initialization is required or not. CLV control or CAV control is appropriately selected for a disk at recording to suppress a reduction in accessibility and a reduction in data transmission rate.

IN THE CLAIMS

Claims 1-29 have been amended hereby as follows.

--1. (Amended) A recording apparatus comprising:
laser-light emitting means for emitting laser light to a
loaded disk;
detecting means for detecting light reflected from the
loaded disk;
driving means for rotating the loaded disk;
determination means for determining [the] a type of the
loaded disk;
driving control means for controlling the driving means
according to [the] a result of determination performed by the
determination means, so as to perform rotation driving at one of
a constant angular velocity [or] and at a constant linear
velocity; and
recording control means for executing recording for the
loaded disk in a state in which the driving control means
performs rotation driving control.

--2. (Amended) The recording apparatus according to
[Claim] claim 1, wherein the detecting means comprises reflected-

light detecting means for detecting [the] an amount of light reflected from the loaded disk, and

the determination means determines the type of the loaded disk according to [the] a detection output of the reflected-light detecting means.

--3. (Amended) The recording apparatus according to [Claim] claim 2, wherein the driving control means controls the driving means so as to perform rotation driving at [a] the constant linear velocity when the loaded disk has a reflectivity higher than a predetermined reflectivity, and so as to perform rotation driving at [a] the constant angular velocity when the loaded disk has a reflectively lower than the predetermined reflectivity.

--4. (Amended) The recording apparatus according to [Claim] claim 1, wherein the driving control means controls the driving means so as to perform rotation driving at [a] the constant linear velocity when the loaded disk is a recordable disk, and so as to perform rotation driving at [a] the constant angular velocity when the loaded disk is a rewritable disk.

--5. (Amended) The recording apparatus according to [Claim] claim 1, wherein the detecting means comprises data detecting means for reading data from the loaded disk according to the light reflected from the loaded disk and for detecting type identification information indicating the type of the disk in the data read from the loaded disk, and

the determination means determines the type of the loaded disk according to [the] a detection output of the data detecting means.

--6. (Amended) A recording apparatus comprising:
reading means for reading data from a loaded disk;
determining means for determining [the] a type of recording from data recorded into the loaded disk, according to [the] a reading output of the reading means;
driving means for rotating the loaded disk;
driving control means for controlling the loaded disk according to [the] a determination output of the determination means so as to perform rotation driving at a one of constant angular velocity [or at] and a constant linear velocity; and
recording control means for executing recording for the loaded disk in a state in which the driving control means

performs rotation driving control.

--7. (Amended) The recording apparatus according to [Claim] claim 6, wherein the determination means determines whether a track recorded into the loaded disk is closed, and, when the track is not closed, determines the type of recording according to packet information recorded into the loaded disk.

--8. (Amended) The recording apparatus according to [Claim] claim 7, wherein the driving control means controls so as to perform rotation driving at [a] the constant angular velocity when the determination means determines that the packet information indicates fixed-length packet recording, in which [the] a data length of a packet is fixed, and so as to perform rotation driving at [a] the constant linear velocity when the determination means determines that the packet information indicates variable-length packet recording, in which the data length of a packet is variable.

--9. (Amended) A recording apparatus comprising:

reading means for reading data from a loaded disk;
detecting means for detecting substituted-area-

identification information indicating whether a substituted area is used in the loaded disk, according to [the] a reading output of the reading means;

driving means for rotating the loaded disk;

driving control means for controlling the driving means according to the substituted-area-identification information so as to perform rotation driving at one of a constant angular velocity [or at] and a constant linear velocity; and

recording control means for executing recording for the loaded disk in a state in which the driving control means performs rotation driving control.

--10. (Amended) The recording apparatus according to [Claim] claim 9, wherein the driving control means controls according to the substituted-area-identification information so as to perform rotation driving at [a] the constant angular velocity when a [detective] substituted area is found and so as to perform rotation driving at [a] the constant linear velocity when [a defective] the substituted area is not found.

--11. (Amended) A recording apparatus comprising:

input means for inputting at least a recording command from

[the] outside the recording apparatus;

driving means for rotating [the] a disk loaded into the apparatus;

determination means for determining whether initialization is required for [a loaded] the disk, when the recording command is input; and

driving control means for controlling the driving means according to [the] a result a of determination performed by the determination means, so as to perform rotation driving at one of a constant angular velocity [or at] and a constant linear velocity.

--12. (Amended) The recording apparatus according to [Claim] claim 11, wherein the driving control means controls so as to perform rotation driving at [a] the constant linear velocity when the initialization is performed and so as to perform rotation driving at [a] the constant angular velocity when recording processing for recording data is performed.

--13. (Amended) A recording apparatus comprising:

reading means for reading data from a loaded disk;

detecting means for detecting recording-start-position

information according to data read by the reading means;

driving means for rotating the loaded disk;

driving control means for controlling the driving mens
according to the recording-start-position information so as to
perform rotation driving at one of a constant angular velocity
[or at] and a constant linear velocity; and

recording control means for executing recording for the
loaded disk in a state in which the driving control means
performs rotation driving control.

--14. (Amended) The recording apparatus according to
[Claim] claim 13, wherein the driving control means controls so
as to perform rotation driving at [a] the constant linear
velocity when a recording-start position is located [more] at a
position inside [than] a predetermined radial position, and so
as to perform rotation driving at [a] the constant angular
velocity when the recording-start position is located [more] at
a position outside [than] the predetermined radial position.

--15. (Amended) The recording apparatus according to
[Claim] claim 13, wherein the driving control means controls to
perform rotation driving at [a] the constant linear velocity when

a recording-start position is located [more] at a position inside [than] a predetermined radial position and starts recording, and switches the control so as to perform rotation driving at [a] the constant angular velocity when a recording position is shifted to a position [more] outside [than] the predetermined radial position.

--16. (Amended) A recording method comprising:

a determination step of determining [the] a type of a loaded disk;

a step of controlling according to [the] a result of the determination step so as to rotate the loaded disk at one of a constant angular velocity [or at] and a constant linear velocity; and

a step of executing recording in a state in which the loaded disk is rotated.

--17. (Amended) The recording method according to [Claim] claim 16, wherein the determination step comprises:

a step of emitting laser light to the loaded disk;

and

a reflected-light detecting step of detecting light reflected from the loaded disk, and

the disk is rotated according to [the] a result of detection in the reflected-light detecting step at one of a constant angular velocity [or at] and a constant linear velocity.

--18. (Amended) The recording method according [Claim] claim 17, wherein the reflected-light detecting step comprises a step of detecting [the] an amount of light reflected from the loaded disk.

--19. (Amended) The recording method according to [Claim] claim 17, wherein the reflected-light detecting step comprises a step of reading type-identification information indicating [the] a type of the loaded disk from the loaded disk.

--20. (Amended) The recording method according to [Claim] claim 17, wherein whether the loaded disk is one of a recordable disk [or] and a rewritable disk is determined in the determination step.

--21. (Amended) A recording method comprising:

a recording-type detecting step of detecting [the] a type of recording of data recorded into a disk;

a step of controlling, according to the type of recording used for the disk, so as to rotate the disk at one of a constant angular velocity [or at] and a constant linear velocity; and

a step of executing recording for the disk in a state in which the disk is rotated.

--22. (Amended) The recording method according to [Claim] claim 21, wherein the recording-type detecting step comprises a step of determining whether a track recorded into the disk is closed [or not].

--23. (Amended) The recording method according to [Claim] claim 22, wherein the recording-type detecting step further comprises:

a step of detecting packet information recorded into the disk, [and] wherein control is performed according to the packet information so as to rotate the disk at one of a constant angular velocity [or at] and a constant linear velocity when it is determined that the

track is not closed.

--24. (Amended) A recording method comprising:

a step of reading from a loaded disk substituted-area-identification information indicating whether the loaded disk is provided with a substituted area;

a step of rotating the loaded disk at one of a constant angular velocity [or at] and a constant linear velocity according to the substituted-area-identification information; and

a step of executing recording for the disk in a state in which the disk is rotated.

--25. (Amended) A recording method comprising:

a determination step of determining whether initialization is required for a loaded disk, when a recording command is input from [the] outside a recording apparatus; and

a control step of controlling, according to [the] a result of determination performed in the determination step, so as to rotate the loaded disk at one of a constant angular velocity [or at] and a constant linear velocity.

--26. (Amended) The recording method according to [Claim] claim 25, wherein, in the control step, control is performed so as to rotate the disk at [a] the constant linear velocity when the initialization is performed, and so as to rotate the disk at [a] the constant angular velocity when recording processing for recording data is performed.

--27. (Amended) A recording method comprising:
a step of reading from a loaded disk recording-start-position information for the loaded disk;
a step of controlling, according to the recording-start-position information, so as to rotate the loaded disk at one of a constant angular velocity [or at] and a constant linear velocity; and
a step of executing recording for the loaded disk in a state in which the loaded disk is rotated.

--28. (Amended) The recording method according to [Claim] claim 17, wherein control is performed so as to perform rotation driving at [a] the constant linear velocity when a recording-start position is located [more] at a position inside [than] a predetermined radial position, and so as to perform rotation

driving at [a] the constant angular velocity when the recording-start position is located [more] at a position outside [than] the predetermined radial position.

--29. (Amended) The recording method according to [Claim] claim 27, wherein control is performed to perform rotation driving at [a] the constant linear velocity when a recording-start position is located [more] at a position inside [than] a predetermined radial position and recording is started, and the control is switched so as to perform rotation driving at [a] the constant angular velocity when a recording position is shifted to a position [more] outside [than] the predetermined radial position.--